

7. BURROW MORPHOLOGY OF FIELD RODENTS
OF KYMORE PLATEAU, SATPURA HILLS

(With four text-figures)

Study of the burrow morphology of major field rodents, namely lesser bandicoot *Bandicota bengalensis* (Gray), soft furred rat *Millardia meltada* (Gray) and field mouse *Mus booduga* (Gray) was undertaken in the Kymore Plateau of Satpura Hills. For this purpose, 24 active burrows of *Bandicota bengalensis*, 28 of *Millardia meltada* and 36 of *Mus booduga* were excavated over a large area. Their burrowing patterns (Figs 1, 2, 3 & 4), amount of soil excavated, number of burrow openings (emergency escape), burrow diameter and burrow depth (Table 1) were studied in harvested wheat fields.

Observations on active burrows revealed that each of these three rodents had a unique burrow pattern. That of *B. bengalensis* was

complicated, well architected, and had distinct runways, of which some are interconnected, and with granaries entering into one or more strata of the soil (Prakash 1975, Jain 1985, Dubey and Thakur 1997). *M. meltada* had a simple and elongate single tier burrow system, whereas *M. booduga* had simple, shallow burrows. In most cases, the burrow entrance of *B. bengalensis* had a large heap of soil with large pebbles, while *M. booduga* had a smaller heap of soil with small pebbles before the burrow opening. In *M. meltada* burrows, the heap of soil was usually absent, but medium sized pebbles (Neelanarayanan *et al.* 1994) were used. Hoarding behaviour was also observed, which is a fairly common and characteristic feature to assure a continuous supply of food against seasonal fluctuation. In

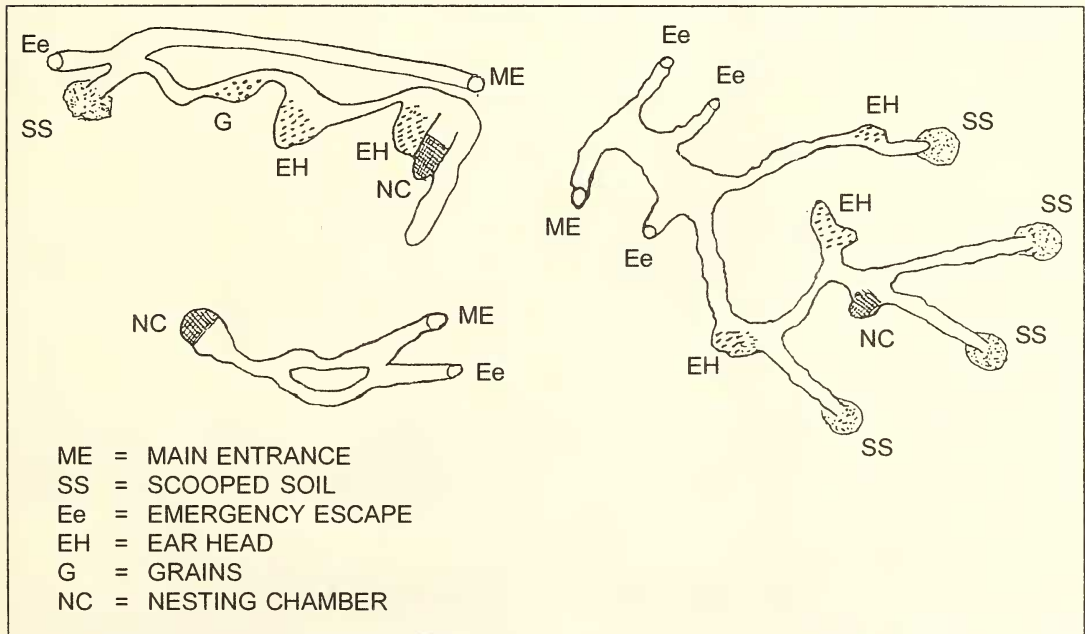


Fig. 1: Burrow structures of *Bandicota bengalensis* in paddy field

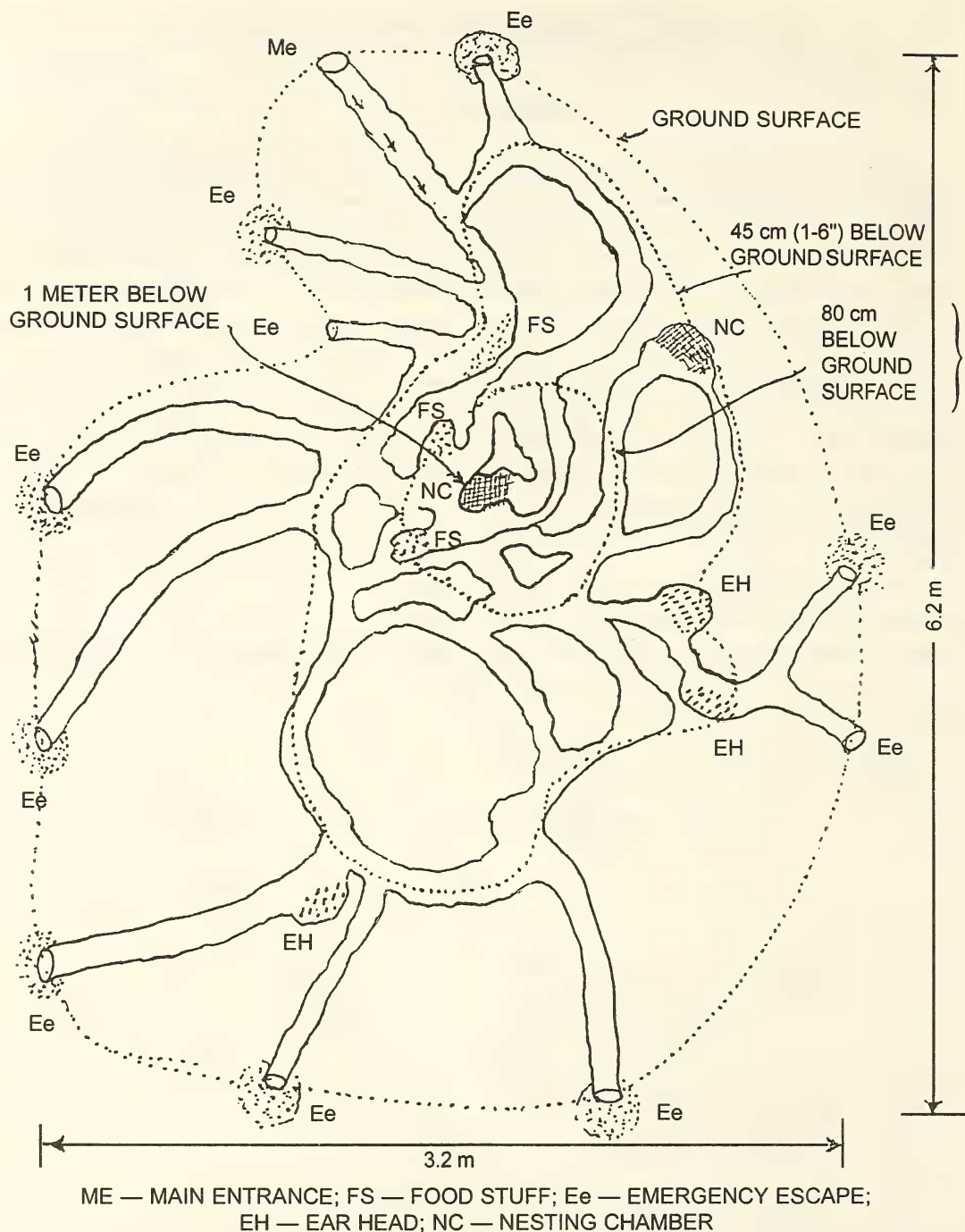


Fig. 2: Complicated burrow structure of *Bandicota bengalensis* in wheat field

MISCELLANEOUS NOTES

TABLE I
OBSERVATIONS ON BURROWING BEHAVIOUR OF MAJOR RODENT SPECIES

Rodent Species	No. of burrows observed	MEAN			
		Amount of soil excavated (kg)	No. of burrow opening (emergency escape)	Burrow diameter (cm)	Burrow depth (cm)
<i>Bandicota bengalensis</i>	24	50.86 ± 4.49 (3.0-138.0)	3.9 ± 3.28 (1-11)	7.5 ± 5.08 (2.5-16.5)	55.85 ± 34.03 (20.2-110.3)
<i>Millardia meltada</i>	28	2.03 ± 1.34 (0.5-3.5)	2.0 ± 1.15 (1-4)	2.9 ± 1.36 (2.1-4.2)	22.57 ± 6.14 (15.0-30.2)
<i>Mus booduga</i>	36	0.98 ± 0.72 (0.1-2.7)	1.2 ± 0.40 (1-2)	2.4 ± 0.33 (2.0-5.0)	17.39 ± 3.36 (10.5-20.0)

Nos in parentheses indicate ranges

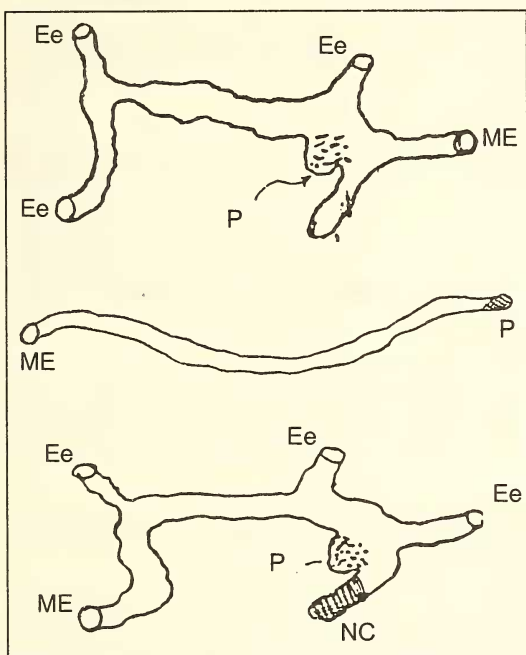


Fig. 3: Burrow structure of *Millardia meltada* in chickpea field

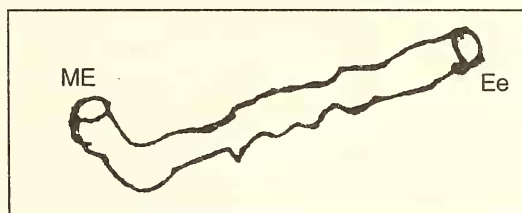


Fig. 4: Burrow structure of *Millardia booduga* in chickpea field

recorded from the burrow of *B. bengalensis* and 0.53 kg from *M. meltada*. Hoarding provides the young rodents with food at a short distance, which can be reached without exposure to predators.

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the lesser bandicoot and soft furred rat, hoarding is prevalent particularly in the pre-harvest period. On an average, 4.28 kg ears of wheat were

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8. THE BARHEADED GOOSE *ANSER INDICUS* LATHAM IN BHAVNAGAR, SAURASHTRA

Bhavnagar (21° 45' N and 72° 08' E) is located on the northeast side of peninsular Saurashtra, Gujarat state, along the coast of the Gulf of Khambhat. On the morning of December 27, 1998, my friend and I visited the Surka village pond for the census of winter migratory birds. The pond is 30 km to the west of Bhavnagar city. While watching waterfowl, we noticed a large bird with distinctive black bars across the nape, grazing along with a flock of ruddy shelduck (*Tadorna ferruginea*) on the bank of the reservoir. It was identified as a barheaded goose (*Anser indicus* Latham). This is the first record of the barheaded goose from Bhavnagar

district. It is very rare in Saurashtra, where the first specimen recorded was from Jamnagar in 1951 (Dharmakumarsinhji 1955), while in January 1984 a flock of 22 barheaded geese were recorded in Mulidam, Surendranagar district (Raol 1988). Usually it is a winter visitor to northern and northeast India (Ali and Ripley, 1987).

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9. MORE INFORMATION ON SHIKRA *ACCIPTER BADIUS* (GMELIN) FEEDING ON SHORTNOSED FRUIT BATS *CYNOPTERUS SPHINX* VAHL.

With reference to the note by Manoj Muni and Vithoba Hegde (*JBNHS*, 1998, 95(2): 338-339) regarding the preying habits of shikra (*Accipiter badius*), I narrate my recent observation on the same habit recorded in the campus of Aligarh Muslim University, Aligarh, Uttar Pradesh, India.

The predation by this bird on shortnosed fruit bats (*Cynopterus sphinx*) seems to be a common phenomenon, though not reported earlier than Muni and Hegde (1998).

On the morning of October 1, 1998, the sky was dark and cloudy, and I was in the balcony of my hostel room, observing shortnosed fruit bats emerging from dried fronds of the palmyra

palm (*Borassus flabellifer* Linn.). This was due to the change in the intensity of light. This tree has been a roosting site of the bats for a long time.

As the bats started flying near the palm, I saw a juvenile shikra (*Accipiter badius*) come out of the dried fronds of the palm with a bat in its talons. The bird sat on the nearby copper pod tree (*Peltophorum pterocarpum*) and started tearing at the flesh of the bat. The bat was alive for about seventeen minutes while being eaten by the bird. At 1005 hrs, it started raining heavily, and I could not make any further observations.